

IN THE CLAIMS:

25. (Currently amended) A process for the preparation of a biological material for the treatment of ulcers, lesions and diverticula of the digestive and gastrointestinal apparatus, which comprises seeding and growing and—morphologically differentiating intestinal cells optionally together with fibroblasts, mesenchimal cells, mature cells and/or epithelial cells on a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid or a derivative thereof as confirmed by the presence of microvilli optionally together with fibroblasts, mesenchimal cells, mature cells and/or epithelial cells on a matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid or a derivative thereof thereby obtaining morphologically differentiated intestinal cells as confirmed by the presence of microvilli.

26. (Previously presented) The process according to claim 25, wherein the said hyaluronic acid derivatives are hyaluronic acid esters wherein part or all of the carboxy functions are esterified with alcohols of the aliphatic, aromatic, arylaliphatic, cycloaliphatic, heterocyclic series.

27. (Previously presented) The process according to claim 25, wherein the said hyaluronic acid derivatives are the cross-linked esters of hyaluronic acid wherein part or all of the carboxy groups are esterified with the alcoholic functions of the same polysaccharide chain or other chains.

28. (Previously presented) The process according to claim 25, wherein the said hyaluronic acid derivatives are the cross-linked compounds of hyaluronic acid wherein part or all of the carboxy groups are esterified with polyalcohols of the aliphatic, aromatic, arylaliphatic, cycloaliphatic, heterocyclic series, generating cross-linking by means of spacer chains.

29 (Previously presented) The process according to claim 25, wherein the

said hyaluronic acid derivatives are hemiesters of succinic acid or heavy metal salts of the hemiester of succinic acid with hyaluronic acid or partial or total esters of hyaluronic acid.

30. (Previously presented) The process according to claim 25, wherein the said hyaluronic acid derivatives are O-sulphated or N-sulphated hyaluronic acid derivatives.

31. (Previously presented) The process according to claim 25, wherein the said hyaluronic acid derivatives are hyaluronic acid amides wherein part or all the free carboxylic groups of hyaluronic acid are reacted with a primary or a secondary amine selected from the group consisting of the aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic amine, that can optionally be a pharmaceutically active substance.

32. (Previously presented) The process according to claim 25, wherein the said hyaluronic acid derivatives are amides wherein a deacylated amino group of hyaluronic acid or of a hyaluronic acid ester wherein part or all of the carboxy functions are esterified with an alcohol selected from the group consisting of aliphatic, aromatic arylaliphatic, cycloaliphatic and heterocyclic series, is reacted with an acid selected from the group consisting of aliphatic, aromatic, arylaliphatic and cycloaliphatic acid, that can optionally be a pharmaceutically active substance.

33. (Cancelled)

34. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of microvilli optionally together with fibroblasts, mesenchimal cells, mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 26.

35. (Previously presented) The process according to claim 25, wherein the hyaluronic acid derivatives are amides wherein a deacylated amino group of hyaluronic acid or of a cross-linked ester of hyaluronic acid wherein part or all of the carboxy groups are esterified with the alcoholic functions of the same polysaccharide chain or other chains, is reacted with an acid selected from the group consisting of aliphatic, aromatic, arylaliphatic and cycloaliphatic acids, that optionally can be a pharmaceutically active substance.

36. (Previously presented) The process according to claim 25, wherein the hyaluronic acid derivatives are amides wherein a deacylated amino group of hyaluronic acid or of a cross-linked compound of hyaluronic acid wherein part or all of the carboxy groups are esterified with polyalcohols of the aliphatic, aromatic, arylaliphatic and cycloaliphatic, and heterocyclic series, generating cross-linking by means of spacer chains, is reacted with an acid selected from the group consisting of the aliphatic, aromatic, arylaliphatic and cycloaliphatic acids, that optionally can be a pharmaceutically active substance.

37. (Previously presented) The process according to claim 25, wherein the hyaluronic acid derivatives are amides wherein a deacylated amino group of hyaluronic acid or of a hemiesters of succinic acid or heavy metal salts of the hemiester of succinic acid with hyaluronic acid or partial or total esters of hyaluronic acid, is reacted with an acid selected from the group consisting of aliphatic, aromatic, arylaliphatic and cycloaliphatic acids, that optionally can be a pharmaceutically active substance.

38. (Previously presented) The process according to claim 25, wherein the hyaluronic acid derivatives are amides wherein a deacylated amino group of hyaluronic acid or of a O-sulphated or N-sulphated hyaluronic acid derivative, is reacted with an acid selected from the group consisting of aliphatic, aromatic, arylaliphatic and cycloaliphatic acids that optionally can be a pharmaceutically active substance.

39. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of

microvilli optionally together with fibroblast, mesenchimal cells, mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 27.

40. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of microvilli, optionally together with fibroblast, mesenchimal cells, mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 28.

41. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of microvilli, optionally together with fibroblast, mesenchimal cells, mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 29.

42. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of microvilli, optionally together with fibroblast, mesenchimal cells, mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 30.

43. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of microvilli, optionally together with fibroblast, mesenchimal cells,

mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 31.

44. (Currently amended) A biological material comprising:

a) intestinal cells morphologically differentiated as confirmed by the presence of microvilli, optionally together with fibroblast, mesenchimal cells, mature cells and/or epithelial cells;

b) a bidimensional matrix selected from the group consisting of a perforated membrane and a continuous membrane consisting essentially of at least one hyaluronic acid derivative as defined in claim 32.